

TITLE

PROCESSES AND DONOR ELEMENTS FOR TRANSFERRING
THERMALLY SENSITIVE MATERIALS TO SUBSTRATES BY THERMAL
IMAGING

ABSTRACT

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Methods of forming a patterned semiconducting-dielectric material on a substrate by thermal processes are disclosed, comprising heating a thermally imageable donor element comprising a substrate and a transfer layer of semiconductive material in conjunction with a dielectric. The donor is exposed with the positive image of the desired pattern to be formed on the receiver, such that the exposed portions of the layer of semiconductive and dielectric material are simultaneously transferred, forming the desired pattern of semiconductive and dielectric material on the receiver. The semiconducting material can be patterned to form a thin film transistor. The method can also be used to pattern a light-emitting polymer or small molecule in conjunction with the charge injection layer to form the light-emitting display for light-sensitive organic electronic devices. Donor elements for use in the process are also disclosed. Methods for forming thin film transistors and donor elements for use in the processes, are also disclosed.

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BCS/dmm